

AMENDMENTS TO THE CLAIMS

Kindly cancel claim 21, and amend claims 23-26 as shown in the listing of claims below. This listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS

1 Claim 21. (cancel)

1 Claim 22. (currently amended) ~~The epitaxial layer of claim 21~~ An epitaxial layer,
2 comprising a metal nitride comprising a metal selected from the group consisting of
3 gallium, aluminum and indium, wherein the epitaxial layer is formed by hydride vapor-
4 phase deposition on a buffer layer and wherein the buffer layer comprises a nitride of an
5 element of groups III or IV of the periodic table formed on a substrate by a metal organic
6 chemical vapor deposition (MOCVD) technique, wherein said epitaxial layer is removed
7 from said buffer layer.

1 Claim 23. (currently amended) The epitaxial layer of claim ~~[[21]]~~ 22, wherein said epitaxial
2 layer and the buffer layer together comprise an epitaxial layer/buffer layer
3 heterostructure, and the epitaxial layer /buffer layer heterostructure is removed from the
4 substrate.

1 Claim 24. (currently amended) A semiconductor heterostructure, comprising:

2 a) a nitride buffer layer, said buffer layer formed by MOCVD; and

3 b) ~~[[b]]~~ a nitride epitaxial layer deposited on said buffer layer, said epitaxial layer
4 formed by HVPE

5 wherein said epitaxial layer is removed from said buffer layer.

1 Claim 25. (original) The heterostructure of claim 24, wherein said buffer layer comprises a
2 material selected from the group consisting of AlN, InN and GaN, and wherein said
3 buffer layer has a thickness in the range of from about 1.0 nanometer to 1.0 micron.

1 Claim 26. (original) The heterostructure of claim 25, wherein said epitaxial layer comprises
2 a metal nitride comprising at least one metal selected from the group consisting of Ga, Al
3 and In and wherein said epitaxial layer has a thickness in the range of from about 1.0
4 micron to 500 micron.

1 Claim 27. (previously presented) An epitaxial layer, comprising:

- 2 a) a buffer layer formed on a substrate by CVD;
- 3 b) a cap layer formed on the buffer layer; and
- 4 c) an epitaxial layer formed on the cap layer by hydride vapor-phase epitaxy.

1 Claim 28. (original) The epitaxial layer of claim 27, wherein the epitaxial layer comprises a
2 nitride comprising an element selected from group III and group IV of the periodic table.

1 Claim 29. (original) The epitaxial layer of claim 27, wherein the substrate comprises a
2 material selected from the group consisting of sapphire, silicon, silicon carbide, gallium
3 arsenide, zinc oxide and magnesium oxide; and the buffer layer comprises aluminum
4 nitride.

1 Claim 30. (original) The epitaxial layer of claim 28, wherein the cap layer and the epitaxial
2 layer have substantially the same composition.

1 Claim 31. (previously presented) The epitaxial layer of claim 27, wherein the cap layer and
2 the epitaxial layer each comprise a nitride comprising an element selected from the group
3 consisting of group III and group IV elements of the periodic table.

1 Claim 32. (original) The epitaxial layer of claim 27 wherein the cap layer is formed by
2 MOCVD.